AMENDMENTS TO THE CLAIMS

1. (currently amended) A device for measuring the rotational unbalance of an article, comprising:

- a) a spindle unit ~~(7)~~ with a spindle holder ~~(29)~~ and with a spindle ~~(11)~~ mounted on the spindle holder ~~(29)~~ rotatably about an axis of rotation ~~(9)~~ and carrying at one of its two ends a coupling ~~(13)~~ for fastening the article ~~(17)~~;;
- b) a holder suspension ~~(49)~~ for fastening the spindle unit ~~(7)~~ to a machine base ~~(1)~~, said holder suspension guiding the spindle holder ~~(29)~~ deflectably in a predetermined measurement direction for unbalance forces;;
- c) an electric motor ~~(5)~~ driving the spindle ~~(11)~~ in rotation;; and
- d) a sensor arrangement ~~(61)~~ measuring the unbalance force in the predetermined measurement direction during rotation of the spindle ~~(11)~~, wherein

~~characterized in that~~

the spindle unit ~~(7)~~ and the electric motor ~~(5)~~ are combined into a first preassembled subassembly and the holder suspension ~~(49)~~ and the sensor arrangement ~~(61)~~ are combined into a second preassembled subassembly, and in that the two subassemblies carry connecting elements ~~(77)~~, assigned to one another in an indexed manner, for the operationally releasable fastening of the subassemblies to one another, such connecting elements.

2. (currently amended) The device as claimed in claim 1, ~~characterized in that~~wherein the electric motor ~~(5)~~ is arranged axially parallel next to the spindle ~~(11)~~ so as to be offset with respect to the axis of rotation ~~(9)~~ of the spindle ~~(11)~~ and is fastened to the spindle holder ~~(29)~~.

3. (currently amended) The device as claimed in claim 2, ~~characterized in that~~wherein the electric motor ~~(5)~~ is arranged in such a way that a plane containing the axes of rotation of the electric motor ~~(5)~~ and of the spindle ~~(11)~~ is inclined with respect to an axial longitudinal plane of the spindle ~~(11)~~ perpendicular to the predetermined measurement direction.

4. (currently amended) The device as claimed in ~~one of claims~~claim 1 ~~to 3~~, ~~characterized in that~~wherein the electric motor ~~(5)~~ and the spindle holder ~~(29)~~ are flanged to a common connecting yoke ~~(35)~~ on the same side of the latter.

5. (currently amended) The device as claimed in claim 4, ~~characterized in that~~ ~~that~~wherein the end of the spindle ~~(11)~~ which is remote from the fastening coupling ~~(13)~~ is drive-connected to the electric motor ~~(5)~~ by means of an endless drive belt ~~(47)~~.

6. (currently amended) The device as claimed in ~~one of claims~~claim 1 ~~to 5~~, ~~characterized in that~~wherein the fastening coupling ~~(13)~~ of the spindle unit ~~(1)~~ has a pneumatic actuating device, the compressed-air supply of which comprises a rotary compressed-air coupling which is held on the spindle holder ~~(29)~~ and which is in constant rotational engagement with the spindle ~~(5)~~.

7. (currently amended) The device as claimed in claim 6, ~~characterized in that~~wherein the rotary compressed-air coupling ~~(109)~~ is provided centrically to the axis of rotation ~~(9)~~ of the spindle ~~(11)~~ on a carrying arm ~~(111)~~ which is arranged solely within the region surrounded by the drive belt ~~(47)~~.

8. (currently amended) The device as claimed in ~~one of claims~~claim 1 ~~to 7~~, ~~characterized in that~~wherein the holder suspension ~~(49)~~ comprises two holder elements ~~(51, 53)~~ which are connected to one another deflectably in the predetermined measurement direction and of which one can be connected to the spindle holder ~~(29)~~ and the other to the machine base ~~(1)~~, and in that the sensor arrangement ~~(61)~~ has at least one force sensor held between the two holder elements ~~(51, 53)~~.

9. (currently amended) The device as claimed in claim 8, ~~characterized in that~~ wherein the holder elements ~~(51, 53)~~ are arranged at a distance from one another and are held against one another by at least one spacer ~~(55)~~ rigid in the distance direction and flexible transversely thereto at least in the measurement direction, in particular a plurality of such spacers ~~(55)~~.

10. (currently amended) The device as claimed in claim 9, ~~characterized in that~~wherein the spacers ~~(55)~~ are designed as leaf springs, the leaf spring plane of which runs perpendicularly to the measurement direction.

11. (currently amended) The device as claimed in claim 9 ~~or 10~~, ~~characterized in that~~wherein the holder elements ~~(51, 53)~~ have projections ~~(57, 59)~~ which project in pairs toward one another and between which the force sensor is arranged.

12. (currently amended) The device as claimed in claim 8, ~~characterized in that~~wherein the holder elements ~~(51b, 53b)~~ are arranged at a distance from one another and are held against one another by at least one spacer ~~(115)~~ flexible in the distance direction defining the measurement direction and essentially rigid transversely thereto.

13. (currently amended) The device as claimed in claim 12, ~~characterized in that~~wherein the spacer ~~(115)~~ is designed as a U-shaped leg spring.

14. (currently amended) The device as claimed in ~~one of claims~~claim 8 ~~to 13~~, ~~characterized in that~~wherein the sensor arrangement ~~(61)~~ has two force sensors which are arranged at a distance from one another in the direction of the axis of rotation ~~(9)~~ of the spindle ~~(11)~~ and are held between the two holder elements ~~(51, 53)~~ and which are supported mirror-symmetrically on the two holder elements ~~(51, 53)~~ with respect to an axial longitudinal plane of the spindle ~~(11)~~ perpendicular to the force measurement direction.

15. (currently amended) The device as claimed in ~~one of claims~~ claim 8 ~~to 14~~, ~~characterized in that~~wherein each force sensor ~~(61)~~ is assigned a spring element ~~(67)~~ prestressing the force sensor ~~(61)~~ in the predetermined force measurement direction.

16. (currently amended) The device as claimed in claim 15, ~~characterized in that~~wherein the force sensor ~~(61)~~ and the spring element ~~(67)~~ assigned to it are supported, prestressed, in series with one another on one of the two holder elements ~~(51, 53)~~, and the other holder element ~~(51)~~ is supported on the force sensor ~~(61)~~ in the force path between the force sensor ~~(61)~~ and the spring element ~~(67)~~.

17. (currently amended) The device as claimed in claim 15 ~~or 16~~, ~~characterized in that~~wherein the force sensor ~~(61)~~ and/or the spring element ~~(67)~~ is held in the force measurement direction on both sides between pivot bearings, particularly balls or tips.

18. (currently amended) The device as claimed in ~~one of claims~~claim 1 ~~to 17~~, ~~characterized in that~~wherein the connecting elements ~~(77)~~ of the two subassemblies have joining faces ~~(79, 81)~~ which are intended to bear against one another and which allow predetermined positioning in the predetermined measurement direction and in at least one direction perpendicular thereto.

19. (currently amended) The device as claimed in claim 18, ~~characterized in that~~wherein the connecting elements are designed as a dovetail guide ~~(77)~~ and comprise clamping means ~~(83)~~ for fixing.

20. (currently amended) The device as claimed in claim 19, ~~characterized in that~~wherein the displacement direction of the dovetail guide ~~(77)~~ runs in the direction of the axis of rotation ~~(9)~~ of the spindle ~~(11)~~.

21. (currently amended) The device as claimed in claim 19 ~~or 20~~, ~~characterized in that~~wherein the dovetail guide ~~(77)~~ has dovetail guide faces ~~(79, 81)~~, one ~~(81)~~ of which is integrally formed directly on the spindle holder ~~(29)~~.

22. (currently amended) The device as claimed in claim 21, ~~characterized in that~~wherein the spindle holder ~~(29)~~ has essentially a cylindrical outer contour which surrounds the integrally formed dovetail guide face ~~(81)~~ on the outside.

23. (currently amended) The device as claimed in ~~one of claims~~claim 19 ~~to 22~~, ~~characterized in that~~wherein the dovetail guide ~~(77)~~ is assigned an indexing limit stop ~~(89)~~ in the displacement direction.

24. (currently amended) The device as claimed in ~~one of claims~~claim 19 ~~to 23~~, ~~characterized in that~~wherein the dovetail guide ~~(77)~~ has mutually assigned dovetail guide faces ~~(79, 81)~~ with bayonet cutouts ~~(85, 87)~~ which allow plugging together transversely to the displacement direction of the dovetail guide ~~(77)~~.

25. (currently amended) The device as claimed in ~~one of claims~~claim 18 ~~to 24~~, ~~characterized in that~~wherein the connecting elements ~~(77)~~ are provided on the spindle holder ~~(29)~~ and the holder suspension ~~(49)~~.

26. (currently amended) The device as claimed in ~~one of claims~~claim 1 ~~to 25 or the preamble of claim 1~~, ~~characterized in that~~wherein there is fastened at one of the axial ends of the spindle ~~(11)~~, in particular at the end carrying the fastening coupling ~~(13)~~ for the article ~~(17)~~, an annular surface element ~~(93)~~, the circumference of which is provided with a magnetic or optical information carrier ~~(95; 113)~~ both for information representing the angle of rotation and for information representing the zero-point rotary position, and in that a reading head arrangement ~~(97; 97a)~~ for reading this information is connected to the spindle holder ~~(29)~~.

27. (currently amended) The device as claimed in claim 26, ~~characterized in that~~wherein the information carrier ~~(95; 113)~~ has next to one another two information tracks ~~(99)~~ which are sensed separately from one another by the reading head arrangement ~~(97; 97a)~~.

28. (currently amended) The device as claimed in claim 26 ~~or 27~~, ~~characterized in that~~wherein the information carrier is designed as a magnetic tape portion ~~(95)~~ which is glued onto the circumference of the annular surface element ~~(93)~~ and the mutually abutting ends of which are cut obliquely in the tape plane.

29. (currently amended) The device as claimed in claim 28, ~~characterized in that~~wherein the information representing the angle of rotation and/or the zero-point rotary position also overlaps the region of the oblique-cut joint ~~(101)~~ of the magnetic tape portion ~~(95)~~.

30. (currently amended) The device as claimed in claim 26 ~~or 27~~, ~~characterized in that~~wherein the information carrier is designed as an optical information carrier, particularly in the form of an annular disk ~~(113)~~, which can be sensed by transmitted light.

31. (currently amended) The device as claimed in ~~one of claims~~claim 26 ~~to 30~~, ~~characterized in that~~wherein the annular surface element ~~(93)~~ has, on its surface facing away from the spindle ~~(11)~~, optical angular degree markings ~~(103)~~.